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PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

MUNEKATA ET AL

Application No.: 10/666,129

Art Unit: 1742

Filed: September 22, 2003

Examiner: Sikyin Ip

For: LEAD-FREE SOLDER ALLOY

FAX COVER LETTER

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450  
Fax: (703) 872-9306

The following materials are being transmitted by facsimile  
to the United States Patent and Trademark Office on April 18,  
2005 in connection with the above-identified application:

Fax cover letter	1 page
Letter submitting declaration	3 pages
Declaration under 37 CFR 1.132 with exhibit	4 pages
<b>TOTAL</b>	<b>8 PAGES</b>

Respectfully submitted,



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SUBMISSION OF DECLARATION UNDER 37 CFR 1.132

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Sir:

The attention of the Examiner is invited to the attached declaration under 37 CFR 1.132 which is presented as evidence of the commercial success of an alloy as claimed in the present application.

On March 21, 2005, the Applicants submitted a declaration under 37 CFR 1.132 by Mr. Yoshitaka Toyoda showing a long-felt, unsatisfied need for a lead-free solder alloy having good wettability comparable to that of a Sn-Ag-Cu alloy but having a lower cost. As set forth in that declaration, the inventors of the present application found that a Sn-Cu-Ni-P alloy provides an

extremely good wettability but at a significantly lower cost than a conventional Sn-Ag-Cu alloy.

The attached declaration is submitted to show the commercial success of such an alloy. The declaration was prepared by Mr. Eietu Hasegawa, who works in the Sales Department of Senju Metal Industry, Co., Ltd, which is the assignee of the present application. The declaration shows that a Sn-0.7Cu-0.06Ni-0.003P solder alloy which is sold by Senju as M725 and which falls within the scope of the claims of the present application has had significant and steadily increasing commercial success.

Taken in combination, these two declarations, showing a long-felt need for an alloy having the properties of a Sn-Cu-Ni-P alloy according to the present application and the immediate commercial success of the M725 alloy meeting this need, demonstrate the non-obviousness of a Sn-Cu-Ni-P alloy according to the present application.

Favorable consideration is respectfully requested.

Respectfully submitted,

*Michael Tobias*

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Attachment

Declaration under 37 CFR 1.132 with exhibit

Certificate of Transmission

I hereby certify that this correspondence is being  
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on April 18, 2005  
(Date of Transmission)

Signature *Michael Tobias*  
Michael Tobias

U.S. PATENT & TRADEMARK OFFICE  
APR 18 2005

PATENT

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re application of:

MUNEKATA ET AL

Application No.: 10/166,129

Art Unit: 1742

Filed: September 22, 2003

Examiner: Sikyin Ip

For: LEAD-FREE SOLDER ALLOY

**DECLARATION UNDER 37 CFR 1.132**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Sir:

I, Eietu Hasegawa, declare as follows:

1. I have been an employee of Senju Metal Industry, Co., Ltd, which is the assignee of the present application, since 1966 and am now one of the Directors of Senju.

2. I currently work in the Sales Department of Senju. My primary duties are the marketing and sales of lead-free solder alloys for use in the manufacture of electronic devices. I am highly familiar with sales figures of Senju's lead-free solder products.

3. In September 2003, Senju began selling a new alloy which we refer to as M725. This is a lead-free solder alloy having a composition of Sn-0.7Cu-0.06Ni-0.003P. This alloy has been marketed as a replacement for conventional Pb-Sn alloys. One of the main selling points of M725 is that it has a wettability comparable to that of conventional Sn-Ag-Cu alloys but at a much lower cost because it does not contain Ag.

4. M725 was immediately employed by Toyota and Denso Corporation on account of its improved wettability and favorable costs.

5. The attached Exhibit 1 shows monthly sales (vertical bars) and cumulative sales (sloping curve) for M725 to Toyota and Denso Corporation for the period between September 2003 and March 2005. As can be seen from this exhibit, the sales of M725 have been increasingly steadily month by month.

6. I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Respectfully submitted,

*E. Hasegawa*

Eiichi Hasegawa  
Adachi-ku, Tokyo,  
Japan

Date: *April 15th, 2005*